

WHAT IS CLAIMED IS:

1. A television tuner comprising:

5 a conductive frame having a first side plate, a second side plate opposite to the first side plate, a third side plate, and a fourth side plate;

a first shield plate dividing the frame into a first division adjacent to the first side plate and a second division adjacent to the second side plate;

10 a distributing section including a distributor that splits one television signal into two television signal components;

a tuning section that converts a frequency of a first of the two television signal components into an intermediate-  
15 frequency signal;

a first connector that receives the television signal;  
and

a second connector from which a second of the two television signal components is output,

20 wherein the first connector is disposed on the third side plate at a portion forming the first division, the second connector is disposed on the first side plate, the distributing section is disposed in the first division, and the tuning section is disposed in the second division.

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2. The television tuner according to claim 1, the distributing section further comprising a first wideband amplifier connected between the first connector and the

distributor,

wherein the first wideband amplifier is disposed in the first division and close to the first connector, and

wherein the distributor is disposed between the first  
5 wideband amplifier and the fourth side plate and adjacent to the first wideband amplifier.

3. The television tuner according to claim 2, further comprising a second wideband amplifier connected between the  
10 distributor and the tuning section,

wherein the second wideband amplifier is disposed between the distributor and the first shield plate and close to the distributor.

15 4. The television tuner according to claim 2, further comprising a third wideband amplifier connected between the distributor and the second connector,

wherein the third wideband amplifier is disposed between the distributor and the first side plate or the fourth side  
20 plate and adjacent to the distributor, and

wherein the second connector is disposed on the first side plate at a portion interfacing with the third wideband amplifier.

25 5. The television tuner according to claim 1, the distributing section further comprising a first wideband amplifier connected between the first connector and the distributor,

wherein the first wideband amplifier is disposed in the first division and is closer to the first connector than other electronic components in the first division, and

wherein the distributor is disposed between the first  
5 wideband amplifier and the fourth side plate and is adjacent to the first wideband amplifier.

6. The television tuner according to claim 5, further comprising a second wideband amplifier connected between the  
10 distributor and the tuning section,

wherein the second wideband amplifier is disposed between the distributor and the first shield plate.

7. The television tuner according to claim 5, further  
15 comprising a third wideband amplifier connected between the distributor and the second connector,

wherein the third wideband amplifier is disposed between at least one of the distributor and the first side plate and between the distributor and the fourth side plate.

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8. The television tuner according to claim 1, the distributing section further comprising a plurality of wideband amplifiers disposed such that a first of the wideband amplifiers is connected between the distributor and  
25 the first connector, a second of the wideband amplifiers is connected between the distributor and the second connector, and a third of the wideband amplifiers is connected between the distributor and the tuning section.

9. The television tuner according to claim 8, wherein the television signal components from the second of the wideband amplifiers to the second connector and from the  
5 third of the wideband amplifiers to the tuning section propagate primarily in opposite directions.

10. The television tuner according to claim 1, wherein the television signal components from the distributor to the  
10 second connector and from the distributor to the tuning section do not propagate in the same direction.

11. The television tuner according to claim 1, further comprising a means for reducing a noise figure due to  
15 distribution loss disposed between the first connector and the distributor.

12. The television tuner according to claim 1, wherein the tuning section includes an input tuning circuit, an  
20 interstage tuning circuit, an oscillator, a mixer, a second shield plate bridging the first shield plate and the second side plate, and a third shield plate bridging the first shield plate and the fourth side plate, and

the second division contains a first compartment bounded  
25 by the third side plate and the second shield plate and that encloses the input tuning circuit, a second compartment bounded by the second shield plate and the third shield plate and that encloses the interstage tuning circuit and

the mixer, and a third compartment bounded by the first shield plate, the third shield plate, and the fourth side plate and that encloses the oscillator.

5        13. The television tuner according to claim 12, wherein the third shield plate is L-shaped.

14. The television tuner according to claim 12, wherein the tuning section further includes a high-frequency  
10 amplifier connected between the input tuning circuit and the interstage tuning circuit.

15. A television tuner comprising:  
a conductive frame having a plurality of side plates;  
15 a plurality of shield plates dividing the frame into a plurality of sections and at least one of the sections into a plurality of sub-sections;  
a distributing section including a distributor that splits a television signal into a plurality of television  
20 signal components;  
a tuning section that converts a frequency of a first of the television signal components into an intermediate-frequency signal, the tuning section containing first and second tuning circuits, a mixer and an oscillator;  
25 a first connector that receives the television signal;  
and  
a second connector from which a second of the television signal components is output,

wherein the first and second connectors are disposed on different side plates, the distributing section is disposed in a first sub-section, the first tuning circuit and mixer are disposed in a second sub-section, and the oscillator is  
5 disposed in a third sub-section.

16. The television tuner according to claim 15, the distributing section further comprising a plurality of wideband amplifiers disposed such that a first of the  
10 wideband amplifiers is connected between the distributor and the first connector, a second of the wideband amplifiers is connected between the distributor and the second connector, and a third of the wideband amplifiers is connected between the distributor and the tuning section.

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17. The television tuner according to claim 16, wherein the television signal components from the second of the wideband amplifiers to the second connector and from the third of the wideband amplifiers to the tuning section  
20 propagate primarily in opposite directions.

18. The television tuner according to claim 16, wherein the television signal components from the distributor to the second connector and from the distributor to the tuning  
25 section do not propagate in the same direction.

19. The television tuner according to claim 15, further comprising a means for reducing a noise figure due to

distribution loss disposed between the first connector and the distributor.

20. The television tuner according to claim 15, wherein  
5 the sub-sections have different sizes and shapes.

21. The television tuner according to claim 15, wherein the distributing section and the tuning section bisect the frame such that the distributing section and the tuning  
10 section are substantially equal in size.

22. The television tuner according to claim 15, further comprising a plurality of terminals mounted on one side plate such that the terminals are separated from one another  
15 at substantially identical intervals, wherein the distributing section and the tuning section divide the frame such that the distributing section is disposed more distal to the terminals than the tuning section.